
XIII. *An Illustration of the Grass called by Linnæus Cornucopiæ alopecuroides. By James Edward Smith, M. D. F. R. S. P. L. S.*

Read November 1, 1803.

SOME time between the publication of the second edition of the *Species Plantarum* and that of the first *Mantissa*, Linnæus received from Professor Arduino a single specimen of an Italian grass, of a most extraordinary appearance, which the learned botanist who sent it conceived might possibly form a new genus. The annexed figure (Tab. XII. fig. 1.) shows the exact appearance of this original specimen. Linnæus remarked its great resemblance to *Alopecurus pratensis*, at the same time noticing the inflated sheath of its upper leaf, in which he found it agree with some species of *Phalaris*. Its most striking peculiarity however, a membranous cup embracing the lower part of the spike, so strongly accorded with the genus *Cornucopiæ*, that Linnæus without scruple so determined it; being, doubtless, well pleased to add a reinforcement to that celebrated and uncommon genus, of which only one species had before been discovered. Nor did he in this determination lose sight of his usual accuracy. On a dissection of the flower he found the corolla of one valve only, as in *Cornucopiæ*, in which mark indeed that genus agrees with *Alopecurus*, being distinguished from it, as from all other grasses, only by the funnel-shaped involucrem which contains the flowers. This part being curiously and regularly notched in the original *Cornucopiæ*, and the flowers beardless, while, in the grass before us, the flowers are awned, and the involucrem nearly entire, furnished Linnæus with sufficient specific distinctions; while the general habit and structure, even the
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inflated sheaths of the leaves, evinced a generic affinity between the two plants. So great indeed is this affinity, that, but for the involucre, the original *Cornucopie cucullatum* would be an *Alopecurus*; for we have lately become acquainted with some species of the latter, whose flowers more nearly agree with it in structure than those which Linnæus knew; while the *Cornucopie alopecuroides* turns out the very identical *Phalaris utriculata* of Linnæus, which is itself a real *Alopecurus*.

I have in another place (*Tour on the Continent, vol. 2. p. 293.*) mentioned that Linnæus described his *Phalaris utriculata* from other authors, without seeing it; a circumstance which may excuse his very erroneous suspicion of its not being distinct from *Phalaris paradoxa*, as well as his not finding it out to be an *Alopecurus*, or that the new grass of Arduino was the very same thing. Both these discoveries occurred to me at once, in examining *Phalaris utriculata* for the purpose of making out its full description for the *Flora Græca*. I found it in character and habit a decided *Alopecurus*, and that some new grasses, which Dr. Sibthorp, from their affinity to *Phleum Gerardi* of Jacquin, had considered as species of *Phleum*, were to be referred to *Alopecurus* also: even the *Phleum Gerardi* perhaps, notwithstanding its having a small inner valve to the corolla, ought, as the accurate Gerard suspected, to be arranged under *Alopecurus*. Having made this discovery, the recollection of *Cornucopie alopecuroides* came into my mind. It had always been an obscure plant, known only by the Linnæan specimen, nor ever found by any botanist except Arduino. Sir Joseph Banks had more than once looked at the specimen with me. His penetrating judgment suspected something anomalous in it, and I was the more ready to acquiesce in his suspicions, from the plant having been found only once: but neither of us could recollect to what it really belonged; for on comparing it carefully with *Alopecurus pratensis*,

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to which Linnæus says it is so very like, they proved decidedly distinct. On turning to the herbarium while full of the idea of *Phalaris utriculata*, or rather, as it must now be called, *Alopecurus utriculatus*, I perceived at once that this wonderful *Cornucopia* was no other than a singular variety of that species, characterized by the cup or ruffle which unfolds the base of the spike. With great satisfaction I perceived rudiments of this ruffle on the grass in its ordinary state, though they had escaped the observation of the accurate Scopoli (*Delicie Insubricæ*, v. 1. t. 12.) and the more exact Baver; and further observed that it does not in any instance run down into a sheath, as Professor Arduino's specimen would, at first sight, induce one to suppose; but that the stem is, in his specimen, much thicker than usual, probably from the same cause of monstrosity which produced the dilated ruffle. Indeed in the true *Cornucopia* the notched cup does not form one common cavity with its horn-like support, the latter being truly a flower-stalk, swelling upwards, hollow within, but closed at the top, where it bears the head of flowers and the notched involucre. Hence it appears how closely *Cornucopia* and *Alopecurus* are really allied; and it may afford amusement as well as instruction to the speculative systematic botanist to consider, how far, in this or any other instance, the existence of some strange peculiarity in the parts of fructification themselves, which this of the *Cornucopia* is not, should lead him to form distinct genera, when general structure and habit do not authorize his proceedings. On the other hand, when other differences, too slight either separately or collectively to form a character themselves, show a real distinction, we may reasonably expect, and should readily seize, some technical character, by which we may define and stamp the newly discovered genus.

Norwich,
October 31, 1803.

XIV. *Description*